

# HYESEUNG LEE

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## Education

### DePaul University, College of Computing and Digital Media

Sep 2023 – Expected May 2026

*Master of Computer Science - Game Programming*

*Chicago, IL*

- Focused on real-time systems, game engine development, and advanced algorithms for creating interactive, immersive experiences. Coursework includes API design, AI for games, and optimization techniques for large-scale game environments.

### University of Oregon, College of Design

Sep 2019 – May 2023

*Bachelor of Arts in Art and Technology*

*Eugene, OR*

- Developed a foundation in digital media, interactive design, and creative problem-solving, enhancing technical skills in game programming by merging artistic vision with technical expertise.

## Work Experience

### 2389 Research

Jun 2025 – Sep 2025

*Software Engineer - Game Chair*

*Chicago, IL*

- Led the end-to-end development of a game-related project, designing and implementing core features for an interactive avatar and related systems across frontend, backend, and infrastructure.
- Managed version control and collaboration using GitHub, leveraging advanced branching strategies, contribution workflows, and CLI tools to ensure seamless cross-platform compatibility (macOS and Windows) and team efficiency.

### DePaul University

Sep 2025 – Present

*Graduate Assistant - Game Design*

*Chicago, IL*

- Assist with Unity-based development on educational game project, focusing on gameplay polish during the beta phase.
- Provide design input on project branding and visual identity, including logo and UI/UX elements, drawing on prior experience in graphic design.

## Projects

### IndieCade Climate Jam

Jun 2024 – Present

*Programmer/Project Manager*

*Remote*

- Led and recruited a group of 12 as a project manager, using organization tools like Excel sheets and Miro
- Participated as a programmer using skills like version controls, Godot, and C sharp programming language
- Developed future plans for the project to expand to a Steam release aiming for a bigger audience and platform

### Final Project – Space Invaders Clone

Feb 2025 - Mar 2025

*Programmer — SE 456: Architecture of Real-Time Systems*

*C sharp (Windows)*

- Developed a complete Space Invaders game from scratch using C sharp in a Windows environment, emphasizing real-time system architecture and object-oriented design.
- Designed and implemented core real-time components, including update loops, input handling, collision detection, audio playback, and animation systems.
- Applied key design patterns (Observer, Strategy, State, Command, Factory, Singleton, etc.) to create reusable, maintainable, and modular game architecture.
- Emphasized software engineering best practices such as version control (Perforce), and continuous integration.

### Final Project – Custom Rendering API and 3D Scene

Feb 2025 - Mar 2025

*Programmer — GAM 470: Rendering and Graphics Programming*

*C++ with DirectX 11*

- Designed and implemented a custom rendering API built over DirectX 11, streamlining graphics programming for modular scene construction and shader management.
- Developed a real-time 3D scene showcasing lighting, camera movement, and texturing, with an emphasis on rendering pipeline performance and visual fidelity.
- Emphasized real-time rendering optimizations through effective resource management, shader abstraction, and asset handling.

## Languages

**Proficient in:** C++, C Sharp, Python, Java, HTML, CSS, Korean, Mandarin Chinese, English